

CLAIMS

We Claim:

1. A computer-implemented method for providing links to one or more resources related to a specified resource comprising:
 - a) configuring by a user a relation comprising a matching criteria for the specified resource;
 - b) associating the relation with the specified resource; and
 - c) processing the relation to create a relation set comprising the links to the one or more related resources satisfying the matching criteria.
2. The method of claim 1, wherein the configuring (a) step includes:
 - a1) selecting by the user a resource type to be returned;
 - a2) in response to the user's selection, retrieving automatically a template corresponding to the resource type, wherein the template comprises a plurality of parameters associated with the corresponding resource type; and
 - a3) allowing the user to create the matching criteria utilizing the plurality of parameters, wherein the one or more related resources satisfy the matching criteria.

3. The method of claim 2, wherein the configuring step (a) further includes:
 - a4) selecting by the user the specified resource for which the relation is to be configured;
 - a5) in response to the user's selection, automatically retrieving and displaying any previously defined relation;
 - a6) allowing the user to select a previously defined relation; and
 - a7) allowing the user to update the matching criteria in the previously defined relation selected.

4. The method of claim 3, wherein the relation further comprises a context constraint that imposes conditions not related to the matching criteria.

5. The method of claim 4, wherein the configuring step (a) includes:
 - a8) retrieving automatically a context template comprising a plurality of context parameters; and

a9) allowing the user to create or update the context constraint utilizing the plurality of context parameters.

6. The method of claim 1 further comprising:
d) storing the relation after it has been associated with the resource in step (b).

7. The method of claim 6, wherein the processing step (c) includes:

c1) requesting by the user to access the specified resource;
and
c2) upon receiving such a request, automatically retrieving the relation associated with the specified resource.

8. The method of claim 7, wherein the processing step (c) further includes:

c3) using the relation as a query to automatically search for the one or more related resources satisfying the matching criteria; and

c4) collecting links for the one or more related resources to create the relation set.

9. The method of claim 7, wherein the relation further comprises a context constraint that imposes one or more conditions not related to the matching criteria, wherein the one or more conditions includes a security criteria.

10. The method of claim 9, wherein the processing step (c) further includes:

c3) examining the security criteria to determine whether the user is authorized to submit the relation; and

c4) returning an error message to the user if the user is not authorized.

11. The method of claim 10, wherein the processing step (c) further includes:

c5) if the user is authorized, examining the context constraint to determine whether the relation is executable upon request.

12. The method of claim 11, wherein the processing step (c) further includes:

- c6) if the relation is executable upon request, using the relation as a query to automatically search for the one or more related resources satisfying the matching criteria; and
- c7) collecting links for the one or more related resources to create the relation set.

13. The method of claim 11, wherein the processing step (c) further includes:

- c6) if the relation is not executable upon request, retrieving automatically a relation set most recently created.

14. The method of claim 7, wherein the processing step (c) further includes:

- c3) allowing the user to define one or more narrowing constraints;

- c4) appending the one or more narrowing constraints to the matching criteria to form a modified matching criteria; and
- c5) searching automatically for the one or more related resources satisfying the modified matching criteria.

15. The method of claim 1 further comprising:
 - d) associating the relation set to the relation and to the specified resource;
 - e) displaying the relation set to the user; and
 - f) allowing the user to utilize the links in the relation set to navigate from the specified resource to the one or more resources satisfying the matching criteria.

16. A computer readable medium containing program instructions for providing links to one or more resources related to a specified resource, comprising instructions for:

- a) allowing a user to configure a relation comprising a matching criteria for the resource;
- b) associating the relation with the specified resource; and

c) processing the relation to create a relation set comprising the links to the one or more related resources satisfying the matching criteria.

17. The computer readable medium of claim 16, wherein the configuring instruction includes:

a1) allowing the user to select a resource type to be returned;

a2) in response to the user's selection, retrieving automatically a template corresponding to the resource type, wherein the template comprises a plurality of parameters associated with the corresponding resource type; and

a3) allowing the user to create the matching criteria utilizing the plurality of parameters, wherein the one or more related resources satisfy the matching criteria.

18. The computer readable medium of claim 17, wherein the configuring instruction further includes:

a4) allowing the user to select the specified resource for which the relation is to be configured;

a5) in response to the user's selection, automatically retrieving and displaying any previously defined relation;

a6) allowing the user to select a previously defined relation:

and

a7) allowing the user to update the matching criteria in the previously defined relation selected.

19. The computer readable medium of claim 18, wherein the relation further comprises a context constraint that imposes conditions not related to the matching criteria.

20. The computer readable medium of claim 19, wherein the configuring instruction includes:

a8) retrieving automatically a context template comprising a plurality of context parameters; and

a9) allowing the user to create or update the context constraint utilizing the plurality of context parameters.

21. The computer readable medium of claim 16 further comprising

instructions for:

d) storing the relation after it has been associated with the resource in step (b).

22. The computer readable medium of claim 21, wherein the processing instruction includes:

c1) allowing the user to request access to the specified resource; and

c2) upon receiving such a request, automatically retrieving the relation associated with the specified resource.

23. The computer readable medium of claim 22, wherein the processing instruction (c) further includes:

c3) using the relation as a query to automatically search for the one or more related resources satisfying the matching criteria; and

c4) collecting links for the one or more related resources to create the relation set.

24. The computer readable medium of claim 22, wherein the relation

further comprises a context constraint that imposes one or more conditions not related to the matching criteria, wherein the one or more conditions includes a security criteria.

25. The computer readable medium of claim 24, wherein the processing instruction (c) further includes:

- c3) examining the security criteria to determine whether the user is authorized to submit the relation; and
- c4) returning an error message to the user if the user is not authorized.

26. The computer readable medium of claim 25, wherein the processing instruction (c) further includes:

- c5) if the user is authorized, examining the context constraint to determine whether the relation is executable upon request.

27. The computer readable medium of claim 26, wherein the processing instruction (c) further includes:

- c6) if the relation is executable upon request, using the relation as a query to automatically search for the one or more related resources satisfying the matching criteria; and
- c7) collecting links for the one or more related resources to create the relation set.

28. The computer readable medium of claim 26, wherein the processing instruction (c) further includes:

- c6) if the relation is not executable upon request, retrieving automatically a relation set most recently created.

29. The computer readable medium of claim 22, wherein the processing instruction (c) further includes:

- c3) allowing the user to define one or more narrowing constraints;
- c4) appending the one or more narrowing constraints to the matching criteria to form a modified matching criteria; and
- c5) searching automatically for the one or more related resources satisfying the modified matching criteria.

30. The computer readable medium of claim 16 further comprising instructions for:

- d) associating the relation set to the relation and to the specified resource;
- e) displaying the relation set to the user; and
- f) allowing the user to utilize the links in the relation set to navigate from the specified resource to the one or more resources satisfying the matching criteria.

31. A system for providing links to one or more resources related to a specified resource comprising:

a resource management system for allowing a user to configure a relation comprising a matching criteria for the resource;

means for associating the relation to the specified resource;

means for storing the relation associated with the specified resource in a relation database coupled to the resource management system;

a search engine coupled to the resource management system for processing the relation to create a relation set comprising the links to the one or more related resources satisfying the matching criteria; and

means for displaying the relation set to the user.

32. The system of claim 31 further comprising:

a user interface coupled to the resource management system for allowing the user to select a resource type to be returned,

wherein, the resource management system includes means for receiving the user's selection and a relation engine for retrieving from the relation database a template corresponding to the resource type, wherein the template comprises a plurality of parameters associated with the corresponding resource type.

33. The system of claim 32, wherein the resource management system further includes means for allowing the user to create the matching criteria utilizing the plurality of parameters via the user interface, wherein the one or more related resources satisfy the matching criteria.

34. The system of claim 32, wherein the relation engine automatically retrieves and displays any previously defined relation for the resource in response to the user selecting the resource to be configured.

35. The system of claim 34, wherein the resource management system includes means for allowing the user to select a previously defined relation and allowing the user to update the matching criteria in the previously defined relation selected.

36. The system of claim 34, wherein the relation further comprises a context constraint that imposes conditions not related to the matching criteria.

37. The system of claim 36, wherein the relation engine automatically retrieves from the relation database a context template comprising a plurality of context parameters and the resource management system includes means for allowing the user to create or update the context constraint utilizing the plurality of context parameters.

38. The system of claim 32, wherein the resource management system includes means for receiving the user's request to access the resource, and wherein the relation engine, in response to such a request,

automatically retrieves the relation associated with the resource.

39. The system of claim 38, wherein the resource management system includes means for passing the matching criteria associated with the relation to the search engine for execution.

40. The system of claim 39, wherein the search engine includes means for locating the one or more related resources satisfying the matching criteria and means for collecting links for the one or more related resources to create the relation set.

41. The system of claim 39 wherein the relation further comprises a context constraint that imposes one or more conditions not related to the matching criteria, wherein the one or more conditions includes a security criteria.

42. The system of claim 41, wherein the resource management system includes means for examining the security criteria prior to passing the matching criteria to the search engine to determine whether the user is authorized to submit the relation and means for returning an error message to the user if the user is not authorized.

43. The system of claim 42, wherein the resource management system includes means for examining the context constraint to determine whether the relation is executable upon request and means for instructing the relation engine retrieve a relation set most recently created if the relation is not executable upon request.

44. The system of claim 38, wherein in response to the user's request to access the resource, the resource management system displays the relation associated with the resource via the user interface and wherein the resource management system further includes means for allowing the user to select the displayed relation, means for allowing the user to define one or more narrowing constraints, means for appending the one or more narrowing constraints to the matching criteria to form a modified matching criteria, and means for passing the modified matching criteria to the search engine for execution.

45. The system of claim 31 further comprising means for allowing the user to utilize the links in the relation set to navigate from the specified resource to the one or more resources satisfying the matching criteria.

46. A method for determining links between a specified resource and one or more related resources comprising:

- a) allowing a user to define a set of relationships associated with the specified resource;
- b) utilizing the set of relationships to determine the links associated with the one or more related resources; and
- c) displaying the links to allow the user to navigate from the specified resource to the one or more related resources by following the associated links.

47. A computer readable medium containing program instructions for determining links between a specified resource and one or more related resources comprising instructions for:

- a) allowing a user to define a set of relationships associated with the specified resource;
- b) utilizing the set of relationships to determine the links associated with the one or more related resources; and
- c) displaying the links to allow the user to navigate from the specified resource to the one or more related resources by following the associated links.

48. A system for determining links between a specified resource and

one or more related resources comprising:

a resource management system including a user interface for allowing a user to define a set of relationships associated with the specified resource;

a search engine coupled to the resource management system for utilizing the set of relationships to determine the links associated with the one or more related resources; and

means for displaying the links to allow the user to navigate from the specified resource to the one or more related resources by following the associated links.